

# ADAPTIVE DE-BLOCKING FILTERING APPARATUS AND METHOD FOR MPEG VIDEO DECODER

## Abstract

A post processing de-blocking filter includes a threshold determination unit for adaptively determining a plurality of threshold values according to at least differences in quantization parameters QPs of a plurality of adjacent blocks in a received video stream and to a user defined offset (UDO) allowing the threshold levels to be adjusted according to the UDO value; an interpolation unit for performing an interpolation operation to estimate pixel values in an interlaced field if the video stream comprises interlaced video; and a de-blocking filtering unit for determining a filtering range specifying a maximum number of pixels to filter around a block boundary between the adjacent blocks, determining a region mode according to local activity around the block boundary, selecting one of a plurality of at least three filters, and filtering a plurality of pixels around the block boundary according to the filtering range, the region mode, and the selected filter.